

APPENDIX D

Rights-of-Way Regulations and Design Standards for Driveways, Drainage, and Utility Construction.

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D.1. PURPOSE OF DRIVEWAY ORDINANCE.

Applicability. This Appendix D shall apply to all driveways or access points planned to connect to a City maintained street. This provisions of this Appendix shall regulate only that portion of a private driveway that connects to a public and extends to the edge of a public right-of-way. The regulation of private driveways on private property is subject to the standards of Article 8 of this Ordinance ⁽¹⁾and the Land Development Standards Manual (LDSM).

- The safety and efficiency of a roadway is impacted by the amount and type of interference experienced by the vehicles moving on it. Some interference may result from other vehicles on the roadway, moving in either the same or the opposite direction. The major form of interference, however, is from vehicles entering, leaving, or crossing the roadway at intersecting streets and driveways. In order to reduce interference with traffic flow, minimize accidents and assure the best overall utilization of the roadway by the motoring public, it is necessary to regulate vehicles entering and leaving roadside developments and intersecting streets.
- The City of Kannapolis recognizes the legal rights of the abutting property owners to have access to their property. However, it must also consider the right of other roadway users to travel with relative safety and freedom interference. Since these rights are at times in conflict, it is the city's responsibility to reconcile and, to the extent feasible, satisfy the needs and desires of all roadway users.
- To accomplish this, the critical areas of driveway location, design and operation must be addressed. The City of Kannapolis has therefore adopted this driveway ordinance ⁽¹⁾and the LDSM to establish standards for the location and design of driveways providing access from public roadways to developments on abutting property. This ordinance has been established to meet the following objectives.
 - (a) To provide maximum safety and protection to the public through the regulation of vehicles entering and exiting public streets and,
 - (b) To provide a uniform ordinance for the design, location, operation and construction of driveways throughout the city, and,
 - (c) To provide owners of abutting property with the maximum service feasible, consistent with the safe and efficient use of city streets.
- The city's intent is to further increase safety and decrease congestion along specified major thoroughfares. In order to accomplish these objectives, certain goals have been identified. These goals are:
 - (a) To prohibit driveways within a certain distance of intersecting streets unless alternate access is not available,
 - (b) To decrease the number of driveways along major thoroughfares, and
 - (c) To increase the distance between adjacent driveways along major thoroughfares.
- This Appendix D ⁽¹⁾and the LDSM is to be administered by the City Engineer and/or his/her designee(s). The issuance of a Driveway permit as prescribed by this Appendix D ⁽¹⁾and the LDSM shall be issued by the Kannapolis Director of Traffic Engineering and/or his/her designee(s).

D.2. DRIVEWAY PERMIT APPLICATION PROCEDURE.

- The procedure for driveway permit application differs according to the type of use of a particular parcel, tract or development.
- Driveway permits for “new” detached, single-family/⁽¹⁾duplex residential construction are ⁽¹⁾required, ⁽¹⁾and must meet the standards of this ordinance. For existing single family residential development, modifications to the driveways will require a driveway permit. The Public Works Department will attempt to accommodate these applicants on a walk-in-basis.
- To apply for a driveway permit for a commercial, industrial or multi-family residential development, two (2) copies of an adequate site plan showing all required information must be submitted to the Director of Transportation. A minimum of three (3) working days is required for the initial review of the site plans.
- In that the permit issued under this ordinance is actually a permit for use of public rights-of-way, the permitting process also applies to any and all work or activity performed in the public right-of-way other than normal daily vehicular and pedestrian traffic. Such uses include but are not limited to street and sidewalk cuts, and private street intersections with public streets. Please consult the Director of Transportation for information about permit requirements for any of these activities.
- The North Carolina Department of Transportation (NCDOT) is required to review all connections to state system streets. This includes both driveway and street connections, with the exception of single family residential drives, which are exempt from state review requirements. State system streets are those streets within the city for which the state retains the ultimate responsibility. However, the more restrictive Driveway Ordinance (NCDOT or City of Kannapolis) shall apply.
- Driveway permits on state system streets, within the City limits of Kannapolis, should be submitted to NCDOT for the initial review. Upon NCDOT’s approval, the driveway permit will be forwarded to the City of Kannapolis for its approval.
- Any questions concerning the application procedure or the requirements of this ordinance should be directed to the City of Kannapolis Public Works Department.

D.3. DEFINITIONS.

- For the purpose of this Appendix D, the following definitions shall apply;
 - **Access:** Ingress and egress to property bordering on public roadways.
 - **Apron:** The paved area between the gutter flow line of the roadway and the sidewalk section.
 - **Commercial driveway:** A driveway providing vehicular access to property used for purposes other than residential.
 - **Corner clearance:** The distance measured along the right-of-way line from the intersection of the projected right-of-way lines to the nearest edge of the driveway approach.
 - **Curbline:** The inside face of curb and gutter.
 - **Curb return:** That section of radius or flare on a driveway between the gutter flow line and the abutting property.
 - **Driveway:** An area on private property providing access for motor vehicles to a public right-of-way.
 - **Driveway angle:** The acute angle between the driveway centerline and the curbline.
 - **Driveway approach:** The improved area between the roadway of a public street and private property intended to provide access for motor vehicles to a well-defined area on private property.
 - **Driveway width:** The width of the driveway measured at the right-of-way parallel with the roadway centerline.
 - **Frontage:** The length of property adjoining the street right-of-way of a single property, tract, or development area between the side property lines.
 - **Outside sidewalk line:** The line generally parallel to the right-of-way line and lying along the edge of the sidewalk section nearest the street right-of-way line.
 - **Residential driveway:** A driveway providing vehicular access to property used for residential purposes. This includes driveways for single family, duplex and triplex uses.

- **Right-of-way:** The land within legally defined property boundaries whose title rests with the city or state and is designated or intended for use as a public street or road way.
- **Side clearance:** The distance measured along the street right-of-way line from the nearest side property corner to the nearest edge of the driveway approach.
- **Sidewalk:** An area on public or private property where pedestrians walk or stand, generally parallel to the edge of the street, roadway or face of curb.
- **Sidewalk section:** That portion of a driveway between the outside sidewalk line and the driveway apron.
- **Spacing:** The closest distance between two driveways, measured along the right-of-way line from edge of drive to edge of drive.

- **Conformance prerequisite to site plan approval.** Driveway approaches hereinafter constructed in the city on public streets and roadways shall be designed and constructed in conformance with this article. It shall be unlawful for any person to construct, cut, break out, or remove any curb along a street or alley except as authorized by the provisions of this article. Failure to construct any driveway approach(es) in conformance with the provisions of this article or failure to correct or remove any existing driveway approach(es) found to be nonconforming may result in the removal of the driveway approach(es) by the city, at the property owner's expense.

D.4. PERMIT REQUIRED.

- (a) No person, firm, or corporation shall remove, alter, or construct any curb, driveway approach, gutter, pavement, or perform any other improvement in any public street or other property owned by or dedicated to the city without first obtaining a permit from the Director of Transportation authorizing such improvements ⁽¹⁾subject to the exceptions as listed in subsection (b).
- (b) ⁽¹⁾Single-family dwellings and duplex dwellings on individual lots are exempt from the requirement for a driveway permit, however, such uses are not exempt from the standards of this Appendix D ⁽²⁾and the LDSM unless specifically indicated.
- (c) A driveway permit is required prior to the issuance of a building permit for new construction, additions, or changes in use.
- (d) Existing driveways shall not be altered within the right-of-way until a permit is obtained. The maintenance of driveways located in or on the right-of-way shall be the responsibility of the property owner.
- (e) Failure to secure a permit as described herein or failure to construct the driveway to city standards or failure to correct or remove existing nonconforming driveway approaches is a violation of this ordinance and subject to enforcement procedures set forth in Article 1 of this ordinance. If the driveway is not removed or brought into compliance within thirty (30) days of notification of violation, the person, firm or corporation doing the original work shall be denied further permits to work on public streets within the city limits of Kannapolis.
- (f) In unusual circumstances minor variations of the minimum requirements may be permitted, based on sound traffic engineering principles, after an engineering investigation by the Director of Transportation.
- (g) No variation in the number and/or width of driveways shall be permitted.

D.5. PLAN SUBMISSION REQUIREMENTS.

- (a) No permit shall be issued until there is filed with the City Engineer for his approval ⁽¹⁾plans showing the location and dimensions of all proposed improvements.
- (b) ⁽¹⁾Six (6) copies of the plans will be required for driveway approaches to state highway system streets within the corporate limits, and six (6) NCDOT Driveway Permit forms.
- (c) Information that must be shown on plans submitted ⁽¹⁾shall be consistent with the Land Development Standards Manual (LDSM).

D.6. PERMIT FEE.

- Fees for permits shall be fixed from time to time by the City Council. A copy of the fee schedule is on file in the office of the Administrator, the office of the City Clerk and in the Public Works Department

D.7. INSPECTIONS.

- Once the permit is duly issued, the supervisor on the driveway construction site shall keep the permit available for on-the-job inspection by authorized personnel of the city.
- The applicant shall request an inspection by City Engineer ⁽¹⁾16 business hours in advance of any concrete pouring. The Director of Transportation or his authorized representative shall have the authority to require the immediate stoppage of work not performed under the requirements of this article ⁽¹⁾and the LDSM.
- In the event of failure to comply with the provisions of this article or the term of the permit or in the case of faulty workmanship or materials, the city may remove the non-complying driveway at the property owner's expense.

(1) TA-2019-05 – City Council approved 12/09/2019

D.8. DRIVEWAY DESIGN STANDARDS.

(1) Specifications

- All work done and all materials used in the construction of driveway approaches shall conform to the current standards established by the City Engineer.

Existing driveway approaches

- Existing driveway approaches shall not be relocated, altered, or reconstructed without a permit approving the relocation, alteration, or reconstruction and such driveway approaches shall be subject to the provisions of this article.
- When the use or layout of any property is changed, making any portion or all of the driveway approach unnecessary, or when the driveway is nonconforming, the owner of the abutting property shall, at his expense, replace all necessary curbs, gutters, and sidewalks, or correct all nonconforming features within thirty (30) days after written notice from the Director of Transportation. Failure to do so may result in a penalty being imposed as described in Section titled Permit Required.

Turn lanes, tapers, deceleration lanes

- Turn lanes, tapers, and/or deceleration lanes may be required by the Director of Transportation where it is anticipated that the volume of traffic using the proposed driveway(s) or street(s) may significantly interfere with the flow of traffic on the abutting public street. Request for turn lanes, deceleration lanes and transition tapers shall be considered as part of the driveway permitting process and must be shown on the submitted site plans, in addition to the other required site plan elements.
- Dedication and construction of turning lanes to serve one or more entrances into a development shall be required in any conditional use, special use, or driveway permit or subdivision approval for a use or development which is adjacent to a two-lane public street with average daily traffic (AT) exceeding five thousand (5000) vehicles per day, or a four-lane or larger public street with AT exceeding ten thousand (10,000) vehicles per day, if any one of the following conditions are also present:
 - (a) The use of development requires Fifty (50) or more off-street parking spaces.
 - (b) The use of development will generate more than (100) trips during the peak hours of 7-9 AM, 11AM-1PM, and 4-6PM. Data shall be based on the Institute of Transportation Engineers Manual titled "Trip Generation" and based upon the highest land use permitted by the zoning classification as affected by any restrictions imposed by any conditional use permit, special use permit, or other legally enforceable restriction.
 - (c) The use of development, as it may be affected by such restrictions, is reasonably expected to generate more than twenty-five (25) truck (more than 13,000 G.V.W.) trips per day through a single driveway.
 - (d) The use or development, as it may be affected by such restrictions, creates special safety or traffic conditions due to limited sight distance and/or posted speeds in excess of thirty-five (35) miles per hour along the adjacent public street. Such conditions shall be determined in writing by the Director of Transportation.
 - (e) The use of development consists of at least fifty (50) attached or detached residential dwelling units.
- The Director of Transportation may require additional side clearance to accommodate the required turn lanes, deceleration lanes and/or tapers.
- The cost of all required turn lanes, deceleration lanes and transition tapers shall be paid for by the property owners. Property owners shall not be entitled to any claims or reimbursement for expenditures involved in construction on public rights-of-way. All construction improvements required herein shall be the property of the City of Kannapolis

Standards for Directional Signs and Pavement Markings for Designated Entrance and Exit Driveways

- The driveway ordinance imposes strict limitations on the number, location, and spacing of driveways on

designated major thoroughfares; however, it allows for two one-way driveway approaches to be considered as a single driveway approach provided that the approaches are clearly signed and marked using directional signs and pavement arrows. Other provisions of the ordinance require signs and markings where special pedestrian or vehicular hazards necessitate the one-way operation of driveways. The following standards apply to all instructional or directional signs and pavement markings used to designate private driveways as entrance and exists.

D.9 ROADSIDE DRAINAGE REQUIREMENTS.

A well-functioning roadside drainage system is important to maintaining the structural integrity of the roadway and providing a safe driving surface during storm events. Roadside drainage is accomplished using either a ditch system including adequately sized and constructed driveway pipes, a curb and gutter system with well-designed curb inlets and drainpipe system, or some combination of both systems. Modifications to existing drainage systems must be evaluated and approved by the City of Kannapolis prior to construction, and are permitted as a part of the right-of-way construction permit system.

Piping Existing Ditches

The design and cost for piping existing roadside ditches is the responsibility of the property owner unless it is included as part of a neighborhood capital improvement project funded by the City of Kannapolis. Piping ditches will only be allowed if the following criteria are achieved.

- The hydraulic capacity of the existing ditch system will not be reduced or diminished.
- The culvert pipe shall be of size adequate to carry the anticipated flow in the ditch as determined by the City of Kannapolis and shall not be smaller than 15-inches inside diameter.
- The flow from and to adjacent properties will not be inhibited.
- All pipe materials and installation meet City of Kannapolis and NCDOT standards. No pipe with broken joints or other defects is allowed.
- A swale can be maintained over the pipe to prohibit sheet flow of water from the property onto the road surface, and adequate inlet grates are included in the design and installation. In no case shall the construction cause water to flow across the pavement, or to pond on the shoulders or in the ditch, or result in erosion within the right-of-way.
- A minimum cover of 8-inches can be maintained over the top of the pipe. If vehicular traffic will cross the pipe, a minimum cover of 24-inches must be maintained, or Class IV reinforced concrete pipe must be utilized.
- Pipe installation must be inspected by the City prior to back-filling the pipe and inlet boxes.
- All grates and frames shall meet NCDOT standards for traffic bearing, and must be pre-approved by the City of Kannapolis.
- Drainage collected by ditches, gutters, or pipes on private property shall not be discharged into the road drainage system unless expressly approved by the City of Kannapolis. The applicant may be required to submit a drainage study to the City justifying the drainage system proposed and the pipe or sewer sizes to be used. Natural drainage laws and practices must be observed.

Pipe Construction Options

All commercial or industrial sites are responsible for the design, construction and cost associated with all drainage improvements in accordance with these regulations. All residents have two options for construction of the ditch pipe, once a permit has been issued. The City will contract with a licensed contractor following payment of all estimated costs associated with the project to the City by the owner. The project will then be completed based upon the Contractor's schedule. The second option is for the resident to hire a licensed contractor who will complete the project according to the submitted plans. The contractor will be responsible to schedule inspection by the City prior to placing any backfill into the excavation, so that all pipe joints, bedding, and inlet construction can be inspected. Failure to obtain the proper permit and/or inspection may result in the pipe being removed at the owner's expense.

Acceptable Piping Materials

All pipe located within the street right-of-way must be reinforced concrete pipe or high density polyethylene plastic pipe, double-walled corrugated pipe with a smooth interior, meeting ASHTO M294 Type S (smooth interior – corrugated interior) that has been approved by the NCDOT for use in secondary and subdivision road systems. No corrugated metal pipe is allowed. Approved HDPE pipe includes the following, but documentation on other manufactures will be reviewed for consideration.

1. Advanced Drainage System (ADS) N-12 HDPE pipe
2. Hancor Hi-Q HDPE pipe

Acceptable Grates and Frames

All grates and frames must be cast iron and must meet City of Kannapolis and NCDOT standards. Each casting shall be permanently imprinted with the image of a fish and the following statement: "Dump No Waste! Drains to Rivers."

D.10 STREET AND UTILITY REPAIRS.

Operations requiring the cutting and removal of roadway and sidewalk surfaces or operations interfering with the normal flow of vehicular or pedestrian traffic shall be subject to the guidelines set forth in Part VI of the Manual of Uniform Traffic Control Devices Handbook.

Prior to cutting of the street, sidewalk or curb and gutter, a street cut permit is required to be obtained from the Director of Transportation or designee. The Public Works Department will be responsible for installing the final layer of asphalt or concrete for each cut. No street cut permits will be issued for streets that have been resurfaced within the last two years, unless there is an emergency situation or other physical constraints and approved by the Director of Transportation.

Cost of replacing the asphalt, concrete or other materials and other related costs such as street cleaning, sidewalk cleaning, etc. as a result of the above described work will be paid by the grantee of the permit. A copy of the permit must be kept at the job location.

Street cuts and sidewalks should be completely repaired in an expedient manner. Cuts must be filled with stable material (asphalt, concrete or approved equal) to within 1 ½ inches of finished grade within 3 days of initial work. Finished roadway surfaces, sidewalks and curbs must be restored within 30 days of initial work.

If circumstances justify, the Director of Transportation may grant an extension of these time requirements.

D.11 USE AND PROTECTION OF PROPERTY.

Use and protection of property

- Rights-of-way of streets may not be used for private or commercial purposes. The area to which the driveway provides access shall be sufficiently large to store any vehicles using the driveway completely off the right-of-way and must be of sufficient size to allow the necessary function to be carried out completely on private property.
- Except for driveway approaches to residences, a six (6) inch raised curb shall be constructed a minimum distance of three (3) feet behind the street right-of-way line in the vicinity of street corners, sidewalk safety zones, entrance driveways and other points in such a manner as to prevent vehicles from crossing sidewalks other than by means of a driveway as herein prescribed, to prevent vehicular overhang on the right-of-way and to provide for proper drainage and control of water on private property.
- Parking areas and loading areas shall be constructed and properly curbed so that all movements to park and un-park, and load and unload will take place back of or within property lines. In the central business area, the Director of Transportation is hereby granted the authority to waive requirements set forth in this subsection after all engineering investigation and provided the following conditions are present:
 - (a) The area is within the parking exempt area of the city;
 - (b) The waiver requested arises from peculiar physical conditions not ordinarily existing in other areas of the city;
 - (c) Due to the nature or operation of the business on the applicant's property the requirements of the above causes unnecessary hardship;
 - (d) The waiver requested is not against the public interest, safety, convenience, and general welfare; and
 - (e) The granting of the waiver will not adversely affect the rights of adjacent property owners.
- Except as may be provided for under the Kannapolis City Code, no part of the right-of-way or the area between the curb or edge of pavement and the property line shall be used to place private signs, fences, wall post lights, or any other item. All such items shall be placed on private property in such a manner as not to interfere with vehicular or pedestrian traffic or visibility.

Protecting the public from injury

- Whenever any person or firm shall do or undertake any of the items set forth in this article it shall be the duty of such person(s) to protect from harm and damage all persons or vehicles which may be using any street, sidewalk, right-of-way or other public area where such work is in progress. To that end, all persons or firms shall erect and maintain suitable barricades, signs, lights, flares and other appropriate warning devices at the proper locations where such work is in progress in accordance with the current policy and regulations for street construction and maintenance operations within the City of Kannapolis, as established by the Director of Transportation and in accordance with the Manual on Uniform Traffic Control Devices for Street and Highways.